

duct protruding from the wall of the building through an air intake opening;

The vent further comprising a weather protecting housing in a shape of a hood extended from the base over the intake opening, the open end of the hood having an integrally molded seat having a front and rear end, and placed on the seat a filter having a moisture resistant material encompassed by a 5/8 aluminum frame, a 1/8 raised pattern grill with 1/4 inch diamond shaped openings, a seat having a lock and a pull tab in the front end to release and remove the filter from the seat.

Claim 2 - The pre - filter device as defined in claim 1 wherein said base with the inverted flange is flush mounted to a metal base of an existing weather protecting housing.

Claim 3 - The pre - filtering device as defined in claim 1 wherein said removable filter consists of an aluminum frame, raised pattern grill, and one hundred percent moisture resistant synthetic fiber material.

this material into an aluminum frame with a raised pattern grill. In the winter the grill allows the frost to build up and keeping it off the media, leaving openings for the air to flow through. Evaporation of the frost is similar to a self - defrosting fridge as the temperature is the same on both sides of the filter.

Remarks

In prior art, several devices have been introduced for supplying make - up air to the forced air heating system as is shown in Kogut US patent no. 4,509,681. These air intake devices are known to use the standard screen with 1/4" opening and are not removable for cleaning. Screens of this nature are known to plug up with debris, freeze up with frost and snow, also allowing spiders, flies and insects, dust and allergens to enter the furnace system.

Hence one skilled in the art in heating is not skilled in the art of filtration. Due to the problems of the outside elements, building codes, a special filter and housing had to be researched and developed.

The engineering requirements are a frame and screen made of corrosion resistant material and a filter media that was moisture resistance. Standard filter media would freeze up and not allow 10% of the make - up air that's required.

The acquire the 10% air flow we use a 3/8" polymed material made of 100% synthetic fiber material , 7.5" by 8" allowing .06 wg,

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